

WHAT IS CLAIMED IS:

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1. A surgical tool, comprising:
2 a tip having at least one mechanical cutting edge; and
3 at least one electrode formed integral with the tip.

1 2. The surgical tool of claim 1, wherein the at least one electrode comprises one of
2 titanium, platinum, copper, nickel, tin, gold, chromium, iron, and silver.

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3. The surgical tool of claim 1, wherein the at least one electrode comprises at least one
2 wire rod, the wire rod having a thickness of about 0.25 mm.

1 4. The surgical tool of claim 1, wherein the tip further comprises a cavity and wherein
2 the at least one electrode comprises a wire rod embedded in the cavity.

1 5. The surgical tool of claim 1, wherein the at least one electrode further comprises a
2 non-stick coating.

1 6. The surgical tool of claim 5, wherein the non-stick coating comprises one of
2 fluoropolymers, ceramic titanium alloys, and ceramics.

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7. The surgical tool of claim 4, wherein the at least one electrode comprises a wire rod,
2 the wire rod having a thickness of about 0.6 mm.

1 8. The surgical tool of claim 1, wherein the tip comprises one of silicon carbide,
2 tungsten carbide, sapphire, steel, and diamond.

1 9. The surgical tool of claim 1, wherein the at least one electrode comprises a friction
2 reducing compound.

1 10. The surgical tool of claim 1, wherein the surgical tool further comprises a contact
2 electrode in electrical communication with the at least one electrode.

1 11. The surgical tool of claim 1, wherein the tip comprises one of a lance and bifacet
2 edge.

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12. The surgical tool of claim 1, wherein the at least one electrode comprises one of titanium nitride, silicon carbide, or tungsten carbide.

1 13. A method of manufacturing a surgical tool, comprising:
2 coupling a tip to a handle;
3 forming at least one cutting edge on the tip; and
4 forming at least one electrode integral with the tip.

1 14. The method of claim 13, further comprising coupling a contact electrode to the handle
2 and establishing an electrical communication with the at least one electrode.

1 15. The method of claim 14, further comprising coupling an energy source to the contact
2 electrode and delivering an electrical current to the at least one electrode through the contact
3 electrode.

1 16. The method of claim 13, further comprising applying a non-stick coating to the at
2 least one electrode.

1 17. The method of claim 13, further comprising applying a friction reducing coating to
2 the at least one electrode.

1 18. The method of claim 13, wherein the forming step further comprises forming a
2 cavity in the tip and embedding the at least one electrode in the cavity.

1 19. The method of claim 13, wherein the forming step further comprises bonding the at
2 least one electrode to an edge of the tip.

1 20. The method of claim 13, further comprising removing the at least one electrode by
2 acid etching.

1 21. The method of claim 13, further comprising coupling the tip to a locking mechanism.

1 22. The method of claim 13, further comprising coupling the tip to a cooling mechanism.

1 23. The method of claim 15, further comprising delivering the electrical current through
2 an edge of the tip.

1 24. A surgical tool, comprising:
2 a housing; and
3 an electrically conductive tip coupled to the housing, the tip having a mechanical
4 cutting edge bonded to a portion of the tip.

1 25. The surgical tool of claim 24, wherein the tip further comprises one of tungsten
2 carbide, silicon carbide, sapphire, steel, and diamond.

1 26. The surgical tool of claim 24, wherein the at least one electrode comprises one of
2 titanium nitride, silicon carbide, or tungsten carbide.

1 27. A surgical tool comprising,
2 a tip coupled to a handle, the tip including a diamond cutting edge;
3 and a plurality of electrodes formed on a surface of the tip, the plurality of electrodes
4 not covering the cutting edge.

1 28. A surgical tool, comprising:
2 a tip having a mechanical cutting edge, the tip being coupled to a handle;
3 a push/pull device formed integral with the handle; and
4 an electrode coupled to a distal end of the push/pull device, the electrode passing
5 across a surface of the tip, when the push/pull device is actuated.

1 29. A system for cauterizing and cutting, comprising:
2 a surgical tool having a tip and a handle coupled to the tip, the tip including a
3 mechanical cutting edge and at least one electrode formed integral with the tip;
4 a contact electrode passing through the handle and electrically coupled to the at least
5 one electrode; and
6 an energy source coupled to the handle to delivery electrocautery energy to the at
7 least one electrode via the contact electrode.

1 30. A surgical tool, comprising:
2 a tip having at least one mechanical cutting edge and a plurality of electrodes, the tip
3 being removably and frictionally engaged to a handle; and
4 a contact electrode formed inside the handle, the contact electrode being in electrical
5 communication with the plurality of electrodes when the tip is removably and frictionally
6 engaged to the handle.

1 31. The surgical tool of claim 30 further comprising a button formed integral with the
2 handle and an energy source in electrical communication with the contact electrode.

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